

ABSTRACT OF THE DISCLOSURE

5 The present invention is directed to a system and method for communicating in a point to multipoint DSL communication network. Preferably, the point to multipoint communication network is established in the environment of a home or small office, and the invention is realized through a computer that may dynamically establish both LAN and WAN communications. Broadly, the system and method are realized by a computer that is configured to assume a role as either a Master or a Slave on a LAN. If the computer is the first (or only) computer powered up on the LAN, then it assumes the role of Master. In this role, the computer establishes a communication link with a WAN (such as with an Internet Service Provider), and directs all WAN communications over the WAN, using a WAN frequency and protocol (such as DSL). As other computers join the LAN, then WAN communications from those computers are relayed through the Master to the WAN. These communications are relayed to the Master using a LAN frequency band. If upon power-up, however, another computer is identified as already being on the LAN (and configured as a Master), then the computer assumes a Slave configuration. In this configuration, all WAN communications are directed to the WAN by way of the Master computer, and are communicated to the Master computer using a LAN frequency band. Return communications, received from the WAN, however, are broadcast directly over the LAN using the downstream frequency band of the DSL service (as opposed to the LAN frequency band), where they may be received by the appropriate Slave computer.

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